

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-21 (Canceled).

22. (currently amended) A method for portion cutting a flaccid food item, comprising the steps of:

scanning at least one of a shape, a structure and/or a dimension of the flaccid food item at a first cutting stage by a measuring means;

determining, using a processor, a portion-cutting profile in connection with said scanning at the first cutting stage;

cutting the flaccid food item into strips at the first cutting stage in accordance with said portion-cutting profile;

transporting said strips from said first cutting stage to a second cutting stage; and

cutting the strips into substantially rectangular pieces of predetermined weight and/or dimension at said second cutting stage on the basis of additional scanning of at least one of a shape, a structure and/or a dimension of the strips at the second stage;

wherein said step of determining a portion-cutting profile at the first cutting stage comprises determining a predetermined dimensions and/or

weights for the cutting-up of said flaccid food item into said strips and for the cutting-up of said strips into said substantially rectangular pieces, on the basis of said at least one of a shape, a structure and/or a dimension of said flaccid food item scanned at the first cutting stage and on the basis of said predetermined weight and/or dimensions.

23. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, whereby said determining said portion-cutting profile comprises the step of planning the whole of a cutting sequence.

24. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, whereby at least a part of said portion-cutting profile is carried out in said first cutting stage.

25. (Cancelled)

26. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, wherein other scanning of the shape, structure and/or dimension of the strips is performed in at least one of two or more cutting devices comprised in the second cutting stage.

27. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, wherein a feeding direction of two or more cutting devices of the second cutting stage is different from that of a first cutting device provided in said first cutting stage.

28. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, wherein at least a part of said portion-cutting profile is communicated further to the second cutting stage.

29. (Cancelled)

30. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, wherein a feeding direction for two or more cutting devices of the second cutting stage lies substantially at right-angles to a feeding direction for a first cutting device provided in the first cutting stage.

31. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, further comprising the step of manually placing the food item in a first cutting device provided in the first cutting stage and/or manually transferring the strips to at least one of one or more cutting devices comprised in the second cutting stage.

32. (currently amended) A method for portion cutting a flaccid food item as set forth in claim 22, further comprising the step of non-manually placing the flaccid food item in a first cutting device provided in the first cutting stage and/or non-manually transferring the strips to at least one of one or more cutting devices provided in the second cutting stage .

Claim 33 (Canceled).

34. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, wherein said processor is arranged to plan the whole of a cutting sequence, and thereby establish said portion-cutting profile.

35. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, wherein said first cutting device is adapted to carry out at least a part of said portion-cutting profile.

36. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, wherein further measuring means are arranged in each of two or more additional cutting devices, each one for scanning at least one of a shape, a structure and/or a dimension of a subset of said strips.

37. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, wherein the processor is arranged to send at least a part of the portion cutting profile further to the one or more additional cutting devices .

38. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, wherein said transporter is a conveyor for transferring one or more of the strips from the first cutting device to at least one of the one or more additional cutting devices .

39. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 41, which

further comprises placing means for placing the flaccid food item in the first cutting device.

40. (currently amended) An apparatus for portion cutting a flaccid food item as set forth in claim 48, wherein a feeding directions of the one or more additional cutting devices are different from that of the first cutting device.

41. (currently amended): An apparatus for portion cutting a flaccid food item into pieces of substantially rectangular shape, comprising:

- a first cutting device including first measuring means for scanning at least one of a shape, a structure and/or a dimension of the flaccid food item;
- a processor for determining a portion-cutting profile in connection with said scanning;
- a first cutting unit included in said first cutting device for cutting the flaccid food item into strips in accordance with said portion-cutting profile;
- a transporter for transporting said strips to one or more additional cutting devices; and
- said one or more additional cutting devices, each comprising further measuring means for scanning at least one of a shape, a structure and/or a dimension of the strips and a cutting unit for cutting the strips into substantially rectangular pieces of predetermined weight and/or dimension;

wherein said portion-cutting profile comprises
determined dimensions and/or weights for the
cutting-up of said flaccid food item into said
strips and for the cutting-up of said strips into
said substantially rectangular pieces.

42. (Cancelled).

43. (currently amended) A method for portion cutting a
flaccid food item, comprising the steps of:

determining at least one physical attribute of the
flaccid food item using a first measuring device;

determining, using a processor, a portion-cutting
profile utilizing said at least one physical
attribute of the flaccid food item and a desired
physical attribute;

first cutting the flaccid food item into strips at the
first cutting stage by cutting in a first cutting
direction, said cutting performed in accordance
with said portion-cutting profile;

transporting at least a portion of said strips to a
second cutting stage;

after said transporting, determining at least one
physical attribute of the at least a portion of
the strips using a second measuring device; and

utilizing said at least one physical attribute of the
at least a portion of the strips for second
cutting said at least a portion of said strips
into substantially rectangular pieces of the
predetermined physical attribute at said second

cutting stage by cutting in a second cutting direction.

Claim 44 (canceled).

45. (previously presented) The method of claim 43, wherein said second cutting direction is substantially perpendicular to said first cutting direction.

46. (previously presented) The method of claim 43, wherein said transporting includes changing a direction of travel of said strips.

47. (previously presented) The apparatus of claim 41, wherein said transporter is adapted to change a direction of travel of said strips.

48. (previously presented) the apparatus of claim 41, wherein said one or more additional cutting devices have substantially parallel feeding directions arranged such that each cutting stage cuts a different subset of said strips into pieces.

Claim 49 (canceled).

50. (previously presented) The method of claim 22, wherein said transporting includes changing a direction of travel of said strips.

51. (new) A method for portion cutting a food item into pieces having a desired shape distribution, comprising the steps of:

determining at least one physical attribute of the food item using a first measuring device;

automatically determining an initial portion-cutting profile utilizing said at least one physical attribute of the food item, said portion-cutting profile providing a cutting sequence for converting said food item into said desired shape distribution, said cutting sequence including a first plan for cutting said food item at the first cutting stage into strips and a second plan for cutting the strips at a second cutting stage into pieces;

first cutting the food item into strips at the first cutting stage according to said first plan;

transporting at least a portion of said strips to a second measuring device located remotely from said first measuring device;

after said transporting, determining at least one physical attribute of each one of the at least a portion of the strips using said second measuring device;

automatically determining, using said second physical attribute, a verification or correction to said portion cutting profile to determine an updated second plan for obtaining said desired shape distribution; and

performing, at a second cutting stage, a cutting of at least a portion of said strips into pieces based on said updated second plan, wherein

said food item is ultimately transformed into pieces having said desired shape distribution at said second cutting stage, or at a subsequent cutting stage.

52. (new) The method of claim 51, wherein said desired shape distribution of the pieces are rectangular pieces.

53. (new) The method of claim 51, wherein said second measuring device is at said second cutting stage.

54. (new) The method of claim 51, wherein other portions of said strips are sent to additional measuring devices for converting the strips of said other portions of said strips into said desired shape distribution at other cutting stages.